

## DIGITAL COMMUNICATION TOOLS

4526

(DIG COMM T)

*Digital Communication Tools* is a business course that prepares students to use computerized devices and software programs to effectively handle communication-related school assignments and to develop communication competencies needed for personal and professional activities after graduation. Students will learn the capabilities and operation of high-tech hardware and software and will develop proficiency using a variety of computer input and output technologies, including touch keyboarding, speech recognition and handwriting recognition. Knowledge of hardware, software, and input and output proficiencies will be applied to communication situations that require problem solving and critical thinking. The projects included in this course will enable students to enhance their math, reading, listening, writing, speaking, and information presentation skills.

- Recommended Grade Level: 7-9
- Recommended Prerequisite: None
- Credits: A one- or two-credit course over one or two semesters
- Counts as a Directed Elective or Elective for the General, Core 40, Core 40 with Academic Honors and Core 40 with Technical Honors diplomas
- A Career Academic Sequence, Career-Technical program, or Flex Credit course
- May be offered at the middle school level for high school credit if the course standards and time requirements are met
- A foundation course for Computer Applications
- Course content standards/performance expectations and Indiana Academic Standards integrated at: <http://www.doe.in.gov/octe/bme/curriculum/contentstandards.htm>
- Teacher Requirements: <http://doe.in.gov/dps/licensing/assignmentcode>
- Career Clusters: A recommended component for career pathways in all Indiana career clusters
- Career pathway information: <http://www.doe.in.gov/careerpathways>

### Course Content Standards and Performance Expectations

#### DCT 1 Computer Literacy and Keyboarding Skill

**DCT 1.1 Content Standard:** Students develop computer literacy.

##### ***Performance Expectations***

- DCT 1.1.1** Identify and operate equipment, including startup and exit procedures
- DCT 1.1.2** Explain and use appropriate file management techniques
- DCT 1.1.3** Demonstrate ethical conduct as it relates to technology
- DCT 1.1.4** Assess software and hardware capability
- DCT 1.1.5** Explain and use appropriate computer terminology
- DCT 1.1.6** Select appropriate technology tool to solve a problem efficiently

**DCT 1.2 Content Standard:** Students develop and refine touch-keyboarding skills.

##### ***Performance Expectations***

- DCT 1.2.1** Demonstrate and discuss correct keyboarding position and techniques including ergonomics, avoidance of repetitive strain injury, etc.
- DCT 1.2.2** Key alphabetic, numeric, and symbolic data using the proper touch technique
- DCT 1.2.3** Key numeric data using the ten-key pad using the proper touch technique
- DCT 1.2.4** Build and demonstrate speed in keying material using the proper touch technique
- DCT 1.2.5** Build and demonstrate accuracy in keying material using the proper touch technique

## **DCT 2            Formatting/Application Skills**

**DCT 2.1            Content Standard:** Students develop and refine formatting/application skills using the touch-keyboarding technique.

### ***Performance Expectations***

**DCT 2.1.1**        Identify and effectively use software features that facilitate formatting documents

**DCT 2.1.2**        Key, format, and edit business and personal business letters using various components and styles to produce a professional document

**DCT 2.1.3**        Key, format, and edit envelopes and labels using appropriate formats

**DCT 2.1.4**        Create and edit a variety of table formats using the table function

**DCT 2.1.5**        Construct tables and insert industry and appropriate tables into other business documents including letters and reports

**DCT 2.1.6**        Create and edit memos and e-mail messages to produce a professional document

**DCT 2.1.7**        Create and edit reports including special parts and documentation to specified report style

**DCT 2.1.8**        Create and edit a variety of personal and professional documents to industry standards

**DCT 2.1.9**        Apply proofreading and editing skills including proofreading and editing marks

## **DCT 3            Business Communication Skills**

**DCT 3.1            Content Standard:** Students develop and refine oral and written communication skills.

### ***Performance Expectations***

**DCT 3.1.1**        Compose, input, and format a variety of business communications appropriate for an array of audiences and situations

**DCT 3.1.2**        Use correct verbal and written language skills and subject-specific terminology

**DCT 3.1.3**        Avoid inappropriate and biased language

**DCT 3.1.4**        Make oral presentations, including visual aids, for designated audiences and situations

**DCT 3.1.5**        Evaluate resources based on their origin to determine bias and integrity of information

**DCT 3.1.6**        Address ethical issues regarding intellectual property and dissemination of electronically generated information

**DCT 3.1.7**        Apply appropriate copyright laws involved in gathering, displaying, and interpreting data

**DCT 3.2            Content Standard:** Students develop and refine proofreading skills.

### ***Performance Expectations***

**DCT 3.2.1**        Apply proper editing marks to hard-copy documents

**DCT 3.2.2**        Review and apply grammatical rules for number usage, capitalization, punctuation, and abbreviations

**DCT 3.2.3**        Proofread and edit documents for meaning and readability

**DCT 3.2.4**        Evaluate documents for content appropriateness and effectiveness of communication

**DCT 3.2.5**        Revise documents making needed corrections

## **DCT 4        Speech Recognition**

**DCT 4.1        Content Standard:**    Students use speech recognition tools with proper techniques.

### ***Performance Expectations***

**DCT 4.1.1**        Create and use a personal speech file/profile

**DCT 4.1.2**        Use proper technique including positioning and adjusting headset or microphone

**DCT 4.2        Content Standard:**    Students use basic speech recognition commands and techniques.

### ***Performance Expectations***

**DCT 4.2.1**        Open and close computer software applications

**DCT 4.2.2**        Utilize menus appropriately

**DCT 4.2.3**        Turn microphone on and off at appropriate times

**DCT 4.2.4**        Use correct commands in entering course appropriate text

**DCT 4.2.5**        Navigate through a document using voice commands

**DCT 4.2.6**        Save and Print documents using voice commands

**DCT 4.3        Content Standard:**    Students develop skill in dictation and editing with speech recognition tools.

### ***Performance Expectations***

**DCT 4.3.1**        Use appropriate commands for formatting

**DCT 4.3.2**        Use appropriate methods for special characters and non-alphabetic text

**DCT 4.3.3**        Use voice commands to select, copy, delete, edit and move text

**DCT 4.3.4**        Add words, including names, to speech recognition dictionary

**DCT 4.4        Content Standard:**    Students format text using speech commands.

### ***Performance Expectations***

**DCT 4.4.1**        Input various documents using speech recognition

**DCT 4.4.2**        Use voice commands to format documents

**DCT 4.4.3**        Apply proofread and editing skills

**DCT 4.4.4**        Create and insert appropriate graphs and tables into documents

**DCT 4.5        Content Standard:**    Students compose documents using speech recognition.

### ***Performance Expectations***

**DCT 4.5.1**        Create documents according to industry standards using speech recognition

**DCT 4.5.2**        Use correct verbal and written language skills and subject-specific terminology

**DCT 4.5.3**        Use appropriate and unbiased language

**DCT 4.5.4**        Use voice commands to cite sources when appropriate

**DCT 4.5.5**        Determine suitable uses of speech recognition for all applications

## **DCT 5        Mobile Technology**

**DCT 5.1        Content Standard:**    Students develop skill in using mobile devices.

### ***Performance Expectations***

**DCT 5.1.1**        Describe leading types and advantages/disadvantages of mobile devices operating systems

**DCT 5.1.2**        Activate programs/applications

- DCT 5.1.3 Specify preferences and understand systems information
- DCT 5.1.4 Set time and calendar preference for local settings
- DCT 5.1.5 Synchronize data with a personal computer
- DCT 5.1.6 Send and receive data from another mobile device

**DCT 5.2      Content Standard:**    Students use mobile devices to create electronic records.

***Performance Expectations***

- DCT 5.2.1 Use the stylus to navigate (if available)
- DCT 5.2.2 Use various handheld input methods (e.g., Graffiti, Graffiti 2, block recognizers, transcriber, voice, and keyboard)
- DCT 5.2.3 Use appropriate input methods to input data

**DCT 5.3      Content Standard:**    Students use mobile devices to maintain electronic records.

***Performance Expectations***

- DCT 5.3.1 Create, search for, and edit entries in the address book or contact list
- DCT 5.3.2 Create, send, and receive personal business cards
- DCT 5.3.3 Maintain address book or contact list
- DCT 5.3.4 Create and edit entries, and set alarms in calendar or date book
- DCT 5.3.5 Maintain a calendar or date book
- DCT 5.3.6 Create, edit, prioritize, check off, and delete task item
- DCT 5.3.7 Attach notes to a task or other items
- DCT 5.3.8 Write, edit, delete, and attach memos or notes
- DCT 5.3.9 Solve real-world mathematical problems using the calculator feature
- DCT 5.3.10 Use a mobile device to calculate financial information using the calculator, pocket spreadsheet, or expense/financial program

***Advanced Performance Expectations***

- DCT 5.3.11 Add, edit, clear, and delete a financial transaction
- DCT 5.3.12 Navigate the Internet
- DCT 5.3.13 Add or edit information on computer to synch with mobile device
- DCT 5.3.14 Manage multimedia elements (if available)
- DCT 5.3.15 Use record function for note taking purposes
- DCT 5.3.16 Add picture to business cards
- DCT 5.3.17 Use podcasting technology for training functions
- DCT 5.3.18 Use vodcasting technology for training functions

**DCT 6      Handwriting Recognition**

**DCT 6.1      Content Standard:** Students use digital tools for handwriting recognition.

- DCT 6.1.1 Use proper technique for digital pen
- DCT 6.1.2 Determine appropriate use of digital ink
- DCT 6.1.3 Create electronic signatures
- DCT 6.1.4 Use handwriting recognition to input data into mobile device or electronic note taking software
- DCT 6.1.5 Determine when appropriate to take handwritten notes.

**DTC 7      Electronic Note-Taking**

**DTC 7.1      Content Standard:** Students organize notes using electronic note-taking software.

**Performance Expectations**

- DCT 7.1.1 Create a folder, section, and page as needed
  - DCT 7.1.2 Demonstrate the write anywhere feature by inputting information on any part of the screen
  - DCT 7.1.3 Organize notes, including creating new sections, pages, and subpages
  - DCT 7.1.4 Use features such as note flags or sticky notes to organize and highlight information
  - DCT 7.1.5 Resize, split, and reorder objects (containers)
  - DCT 7.1.6 Create bulleted lists
  - DCT 7.1.7 Create outlines for reports, presentations or other documents
  - DCT 7.1.8 Organize notes through the use of formatting applications, including color and highlighting
  - DCT 7.1.9 Use template stationery
  - DCT 7.1.10 Change section and page color
- DCT 7.2      **Content Standard:**    Students use advanced functions of electronic note-taking software.

**Performance Expectations**

- DCT 7.2.1 Search for desired content within notes
- DCT 7.2.2 Add ruled lines to screen for handwriting
- DCT 7.2.3 Create and manipulate side notes
- DCT 7.2.4 Sketch pictures and graphic organizers in document
- DCT 7.2.5 Insert pictures from various sources
- DCT 7.2.6 Download information from Internet and other software application files
- DCT 7.2.7 Copy formatted notes to word processing software
- DCT 7.2.8 Insert documents from other applications
- DCT 7.2.9 Manipulate pages and sections by moving to new locations

**Advanced Performance Expectations**

- DCT 7.2.10 Send notes by e-mail to instructor
- DCT 7.2.11 Use record function for taping presentation while taking electronic notes
- DCT 7.2.12 Create an outlook item using electronic note taking software
- DCT 7.2.13 Copy item from Pocket PC or SmartPhone

**DCT 8            Alternative Input Devices**

- DCT 8.1      **Content Standard:**    Students use other alternative input devices.

**Performance Expectations**

- DCT 8.1.1 Import images and documents from various input devices such as digital cameras or scanners
- DCT 8.1.2 Create and use OCR documents from scanners
- DCT 8.1.3 Determine appropriate file format used for images (GIF, PDF, video, etc.) based on their intended use
- DCT 8.1.4 Explain the uses of current and emerging alternative input devices

# **Indiana Academic Standards Integrated into Digital Communication Tools**

## **English/Language Arts**

### *Standard 1*

*READING: Word Recognition, Fluency, and Vocabulary Development*

#### Vocabulary and Concept Development

- 9.1.2 Distinguish between what words mean literally and what they imply and interpret what the words imply.

### *Standard 2*

*READING: Comprehension and Analysis of Nonfiction and Informational Text*

#### Structural Features of Informational and Technical Materials

- 9.2.1 Analyze the structure and format of reference or functional workplace documents, including the graphics and headers, and explain how authors use the features to achieve their purposes.

#### Analysis of Grade-Level-Appropriate Nonfiction and Informational Text

- 9.2.5 Demonstrate use of technology by following directions in technical manuals.

#### Expository (Informational) Critique

- 9.2.7 Evaluate an author's argument or defense of a claim by examining the relationship between generalizations and evidence, the comprehensiveness of evidence, and the way in which the author's intent affects the structure and tone of the text.

### *Standard 4*

*WRITING: Processes and Features*

#### Organization and Focus

- 9.4.1 Discuss ideas for writing with classmates, teachers, and other writers and develop drafts alone and collaboratively.
- 9.4.2 Establish a coherent thesis that conveys a clear perspective on the subject and maintain a consistent tone and focus throughout the piece of writing.
- 9.4.3 Use precise language, action verbs, sensory details, and appropriate modifiers.

#### Research Process and Technology

- 9.4.4 Use writing to formulate clear research questions and to compile information from primary and secondary print or Internet sources.
- 9.4.5 Develop the main ideas within the body of the composition through supporting evidence, such as scenarios, commonly held beliefs, hypotheses, and definitions.
- 9.4.6 Synthesize information from multiple sources, including almanacs, microfiche, news sources, in-depth field studies, speeches, journals, technical documents, and Internet sources.
- 9.4.7 Integrate quotations and citations into a written text while maintaining the flow of ideas.
- 9.4.8 Use appropriate conventions for documentation in text, notes, and bibliographies, following the formats in specific style manuals.

## Evaluation and Revision

9.4.10 Review, evaluate, and revise writing for meaning, clarity, content, and mechanics.

9.4.11 Edit and proofread one's own writing, as well as that of others, using an editing checklist with specific examples of corrections of frequent errors.

9.4.12 Revise writing to improve the logic and coherence of the organization and perspective, the precision of word choice, and the appropriateness of tone by taking into consideration the audience, purpose, and formality of the context.

## Standard 5

### *WRITING: Applications (Different Types of Writing and Their Characteristics)*

9.5.3 Write expository compositions, including analytical essays and research reports that:

- gather evidence in support of a thesis (position on the topic), including information on all relevant perspectives.
- communicate information and ideas from primary and secondary sources accurately and coherently.
- make distinctions between the relative value and significance of specific data, facts, and ideas.
- use a variety of reference sources, including word, pictorial, audio, and Internet sources, to locate information in support of topic.
- include visual aids by using technology to organize and record information on charts, data tables, maps, and graphs.
- anticipate and address readers' potential misunderstandings, biases, and expectations.
- use technical terms and notations accurately.

9.5.5 Write documents related to career development, including simple business letters and job applications that:

- present information purposefully and in brief to meet the needs of the intended audience.
- follow a conventional business letter, memorandum, or application format.

9.5.6 Write technical documents, such as a manual on rules of behavior for conflict resolution, procedures for conducting a meeting, or minutes of a meeting that:

- report information and express ideas logically and correctly.
- offer detailed and accurate specifications.
- include scenarios, definitions, and examples to aid comprehension.
- anticipate readers' problems, mistakes, and misunderstandings.

9.5.7 Use varied and expanded vocabulary, appropriate for specific forms and topics.

9.5.8 Write for different purposes and audiences, adjusting tone, style, and voice as appropriate.

## Standard 6

### *WRITING: English Language Conventions*

#### Grammar and Mechanics of Writing

9.6.1 Identify and correctly use clauses, both main and subordinate; phrases, including gerund, infinitive, and participial; and the mechanics of punctuation, such as semicolons, colons, ellipses, and hyphens.

9.6.2 Demonstrate an understanding of sentence construction, including parallel structure, subordination, and the proper placement of modifiers, and proper English usage, including the use of consistent verb tenses.

#### Manuscript Form

9.6.3 Produce legible work that shows accurate spelling and correct use of the conventions of punctuation and capitalization.

- 9.6.4 Apply appropriate manuscript conventions — including title page presentation, pagination, spacing, and margins — and integration of source and support material by citing sources within the text, using direct quotations, and paraphrasing.

#### *Standard 7*

#### *LISTENING AND SPEAKING: Skills, Strategies, and Applications*

##### **Organization and Delivery of Oral Communication**

- 9.7.2 Choose appropriate techniques for developing the introduction and conclusion in a speech, including the use of literary quotations, anecdotes (stories about a specific event), and references to authoritative sources.
- 9.7.3 Recognize and use elements of classical speech forms (including the introduction, transitions, body, and conclusion) in formulating rational arguments and applying the art of persuasion and debate.
- 9.7.4 Use props, visual aids, graphs, and electronic media to enhance the appeal and accuracy of presentations.
- 9.7.6 Analyze the occasion and the interests of the audience and choose effective verbal and nonverbal techniques (including voice, gestures, and eye contact) for presentations.

##### **Analysis and Evaluation of Oral and Media Communications**

- 9.7.7 Make judgments about the ideas under discussion and support those judgments with convincing evidence.
- 9.7.10 Assess how language and delivery affect the mood and tone of the oral communication and make an impact on the audience.
- 9.7.11 Evaluate the clarity, quality, effectiveness, and general coherence of a speaker's important points, arguments, evidence, organization of ideas, delivery, choice of words, and use of language.
- 9.7.12 Analyze the types of arguments used by the speaker, including argument by causation, analogy (comparison), authority, emotion, and logic.
- 9.7.13 Identify the artistic effects of a media presentation and evaluate the techniques used to create them (comparing, for example, Shakespeare's *Romeo and Juliet* with Franco Zeffereilli's film version).

##### **Speaking Applications**

- 9.7.15 Deliver expository (informational) presentations that:
- provide evidence in support of a thesis and related claims, including information on all relevant perspectives.
  - convey information and ideas from primary and secondary sources accurately and coherently.
  - make distinctions between the relative value and significance of specific data, facts, and ideas.
  - include visual aids by employing appropriate technology to organize and display information on charts, maps, and graphs.
  - anticipate and address the listeners' potential misunderstandings, biases, and expectations.
  - use technical terms and notations accurately.
- 9.7.19 Deliver descriptive presentations that:
- establish a clear point of view on the subject of the presentation.
  - establish the presenter's relationship with the subject of the presentation (whether the presentation is made as an uninvolved observer or by someone who is personally involved).
  - contain effective, factual descriptions of appearance, concrete images, shifting perspectives, and sensory details.



## **Mathematics**

### **Algebra I**

#### *Standard 9*

#### *Mathematical Reasoning and Problem Solving*

A1.9.2 Decide whether a solution is reasonable in the context of the original situation.